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IN THE CLAIMS:

The text of all pending claims, (including withdrawn claims) is set forth below. Cancelled and not entered claims are indicated with claim number and status only. The claims as listed below show added text with underlining and deleted text with ~~striketrough~~. The status of each claim is indicated with one of (original), (currently amended), (cancelled), (withdrawn), (new), (previously presented), or (not entered).

Please AMEND claims 1, 3, 12, 13 and 15 and ADD new claim 17 in accordance with the following:

1. (currently amended) A signature creating apparatus which creates a digital signature, said signature creating apparatus comprising:

a clock in which time information is set only by a time authentication authority;

an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a form capable of preventing interpolation;

a personal identification storing unit which stores personal identification information for specifying a person who has a proper right to update stored contents;

a connecting unit which creates connection data by connecting plain-text, the time information, ~~an the apparatus ID for specifying the creating apparatus~~, and the personal identification information that identifies the a person using the creating apparatus to create the digital signature; and

a signature creating unit which creates the digital signature using the connection data created by said connecting unit and a key used only for creating a signature,

wherein the personal identification information is stored within the signature creating apparatus using a form capable of preventing interpolation, and the signature creating unit encrypts the connection data to create the digital signature, and connects the digital signature to the time information, the apparatus ID, and the personal identification information to create a signal data to be transmitted to a network.

2. (cancelled)

3. (currently amended) The signature creating apparatus according to claim 21, further comprising:

a storage unit which stores the personal identification information;

a judging unit which judges as to whether or not a person who updates stored contents of

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said storage unit is a person who has proper right; and

an updating unit which updates the stored contents of said storage unit only when said judging unit has judged that the person who updates is the person who has proper right.

4. (original) The signature creating apparatus according to claim 1 comprises an unrewritable storage unit in which the apparatus ID is stored.

5. (original) The signature creating apparatus according to claim 1, further comprises a confirming unit which confirms a working state of said clock,

wherein said signature creating unit creates the digital signature only when said confirming unit confirms that said clock works normally.

6. (previously amended) The signature creating apparatus according to claim 5, wherein said signature creating unit stops using the key used only for creating the signature when said confirming unit confirms that said clock does not work normally, and creates an alternate digital signature using connected information which does not include the time information and using a key other than the key used only for creating the signature.

7. (original) The signature creating apparatus according to claim 5, wherein said confirming unit confirms the working state of said clock based on a result of comparing a driving voltage of said clock with a threshold.

8. (original) The signature creating apparatus according to claim 5, wherein said confirming unit confirms the working state of said clock based on a result of comparing a time-counted result of said clock before certain time and a time-counted result at current time.

9. (original) The signature creating apparatus according to claim 5, wherein said confirming unit brings a flag into ON state when said clock works normally, and brings the flag into OFF state when said clock does not work normally; and wherein said signature creating unit creates the digital signature only when the flag is ON state.

10. (original) The signature creating apparatus according to claim 1, further

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comprising a setting unit which sets the time information according to a time setting request, said setting unit being installed in the time authentication authority.

11. (original) The signature creating apparatus according to claim 1, further comprising a correcting unit which corrects said clock automatically, said correcting unit being installed in the time authentication authority.

12. (currently amended) A signature creating apparatus which creates a digital signature using a common key method, said signature creating apparatus comprising:

an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a form capable of preventing interpolation;

a personal identification storing unit which stores personal identification information for specifying a person who has a proper right to update stored contents;

a connecting unit which creates connection data by connecting an the apparatus ID for specifying the creating apparatus, plain-text, the personal identification information that identifies the a person using the creating apparatus to create the digital signature, and time information; and

signature creating unit which creates the digital signature using the connection data created by said connecting unit and a common key only for signature creating,

wherein the personal identification information is stored within the signature creating apparatus using a form capable of preventing interpolation, and the signature creating unit encrypts the connection data to create the digital signature, and connects the digital signature to the time information, the apparatus ID, and the personal identification information to create a signed data to be transmitted to a network.

13. (currently amended) A signature verification apparatus which verifies interpolation based on a digital signature created by a signature creating apparatus,

said signature ~~verification creating~~ apparatus having,

a clock in which time information is set only by a time authentication authority;

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an ID storing unit which stores an apparatus ID for specifying a creating apparatus using a form capable of preventing interpolation;

a personal identification storing unit which stores personal identification information for specifying a person who has a proper right to update stored contents;

a connecting unit which creates connection data by connecting the time information, ~~an the apparatus ID for specifying a creating apparatus,~~ plain-text, and ~~the~~ personal identification information that identifies ~~the a~~ person using the creating apparatus to create the digital signature; and

a signature creating unit which creates the digital signature using connection data created by said connecting unit and a key used only for creating the signature,

said signature verification apparatus having,

a receiving unit which receives the plain-text to which the digital signature is connected; and

a signature verification unit which verifies the interpolation using the digital signature, the plain-text and a key used only for verification of the signature,

wherein the personal identification information is stored within the signature creating apparatus using a form capable of preventing interpolation, and the signature creating unit encrypts the connection data to create the digital signature.

14. (original) The signature verification apparatus according to claim 13, further comprising a signature verification key generating unit which receives cryptographic information about encrypting the key only for verification of the signature and decoding the cryptographic information so. as to generate the key only for verification of the signature.

15. (currently amended) A signature apparatus, comprising:

a clock in which time information is set only by a time authentication authority;

an ID storing unit which stores an apparatus ID for specifying the creating apparatus using a form capable of preventing interpolation;

a personal identification storing unit which stores personal identification information for specifying a person who has a proper right to update stored contents;

a connecting apparatus which creates connection data by connecting the time

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information, ~~an the apparatus ID for specifying a creating apparatus~~, plain-text, and ~~the personal identification information that identifies the a person using the~~ creating apparatus to create the digital signature;

a signature creating unit which creates a digital signature using the connection data created by said connecting unit and a key used only for creating a signature;

a receiving unit which receives the plain-text to which the digital signature is connected;

a signature verification unit which verifies interpolation using the digital signature, the plain-text and

a key used only for verification of a signature; and

a function selecting unit which makes a signature creating function effective in said clock, said connecting unit and said signature creating unit at the time of the creating, and making a signature verification function effective in said receiving unit and said signature verification unit at the time of the verification,

wherein the personal identification information is stored within the signature creating apparatus using a form capable of preventing interpolation.

16. (previously presented) The signature apparatus according to claim 15, further comprising:

a switching unit which switches a function as a lower apparatus and a function as an upper apparatus; and

a key generating unit which generates a key used only for verification of the signature based on an apparatus ID for specifying another signature apparatus which is the lower apparatus and where the signature creating function is made effective when said key generating unit is switched so as to function as said upper apparatus by said switching unit and the signature verification function is made effective by said function selecting unit,

wherein the key used only for creating the signature and the key used only for verification of the signature are common keys in a common key method, and said, signature verification unit verifies the interpolation using the key for the signature verification generated by said key generating unit.

17. (new) A digital signature creating apparatus comprising:

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a clock which creates time information;
an ID storing unit which stores an apparatus ID for specifying the creating apparatus;
a personal identification storing unit which stores personal identification information for specifying a person who has a proper right to update stored contents, the apparatus ID and the personal identification information being stored in a form capable of preventing interpolation;
a connecting unit which creates connection data by connecting plain-text, the time information, the apparatus ID, and the personal identification information that identifies a person using the creating apparatus to create a digital signature;
a signature creating unit which creates the digital signature using the connection data created by said connecting unit and a key used only for creating a signature; and
a signal creation unit which connects the digital signature to the time information, the apparatus ID, and the personal identification information to create signal data to be transmitted.